

Figures

Fig 1 – Bird's eye view of the system

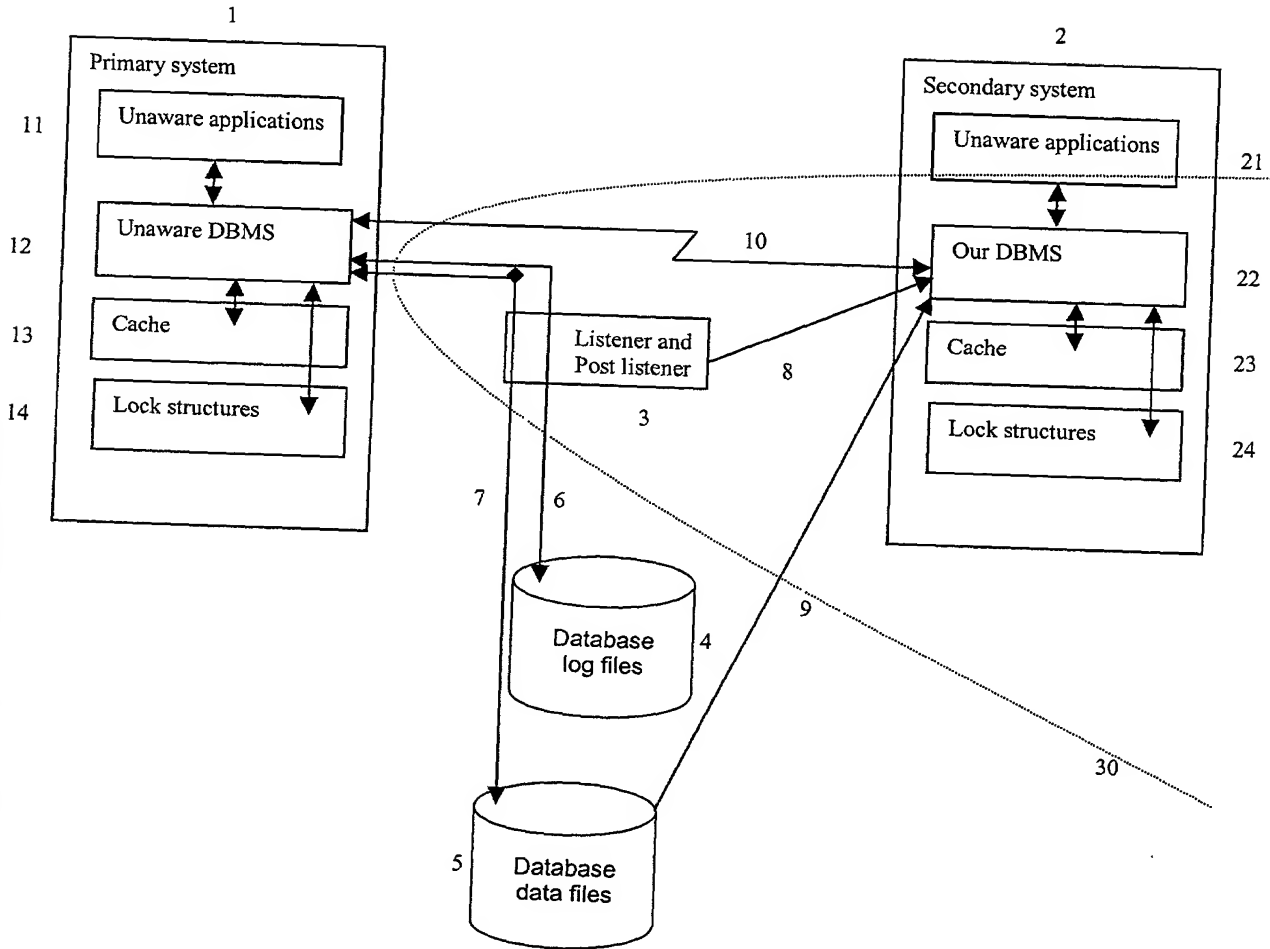


Fig 2 – the structure describing an Item of Interest

101	102	103	104	105	106	107	108	109	10A
Item type	ID	Dirty part	Previous transaction	Locking transaction	Optimization info	List of Pending reads	Before image	After image	Our transaction

100

Fig3 – The structure describing a transaction

200	
Transaction ID	List of items

202 203

301	302	303
Item Type	Item ID	Next Item

300

Fig 4 – Physical block written to the log

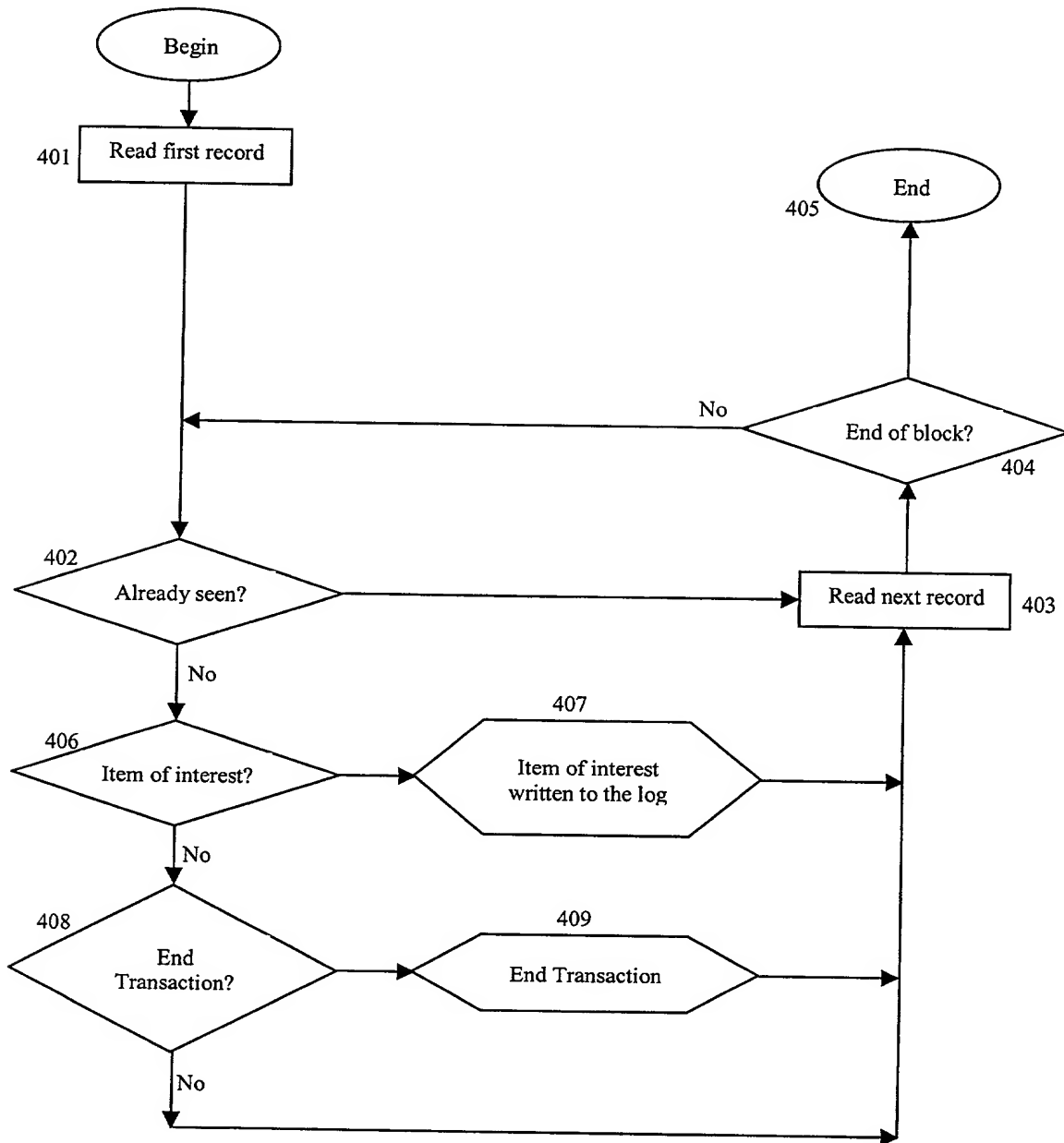


Fig 5 –Item of Interest written to the log

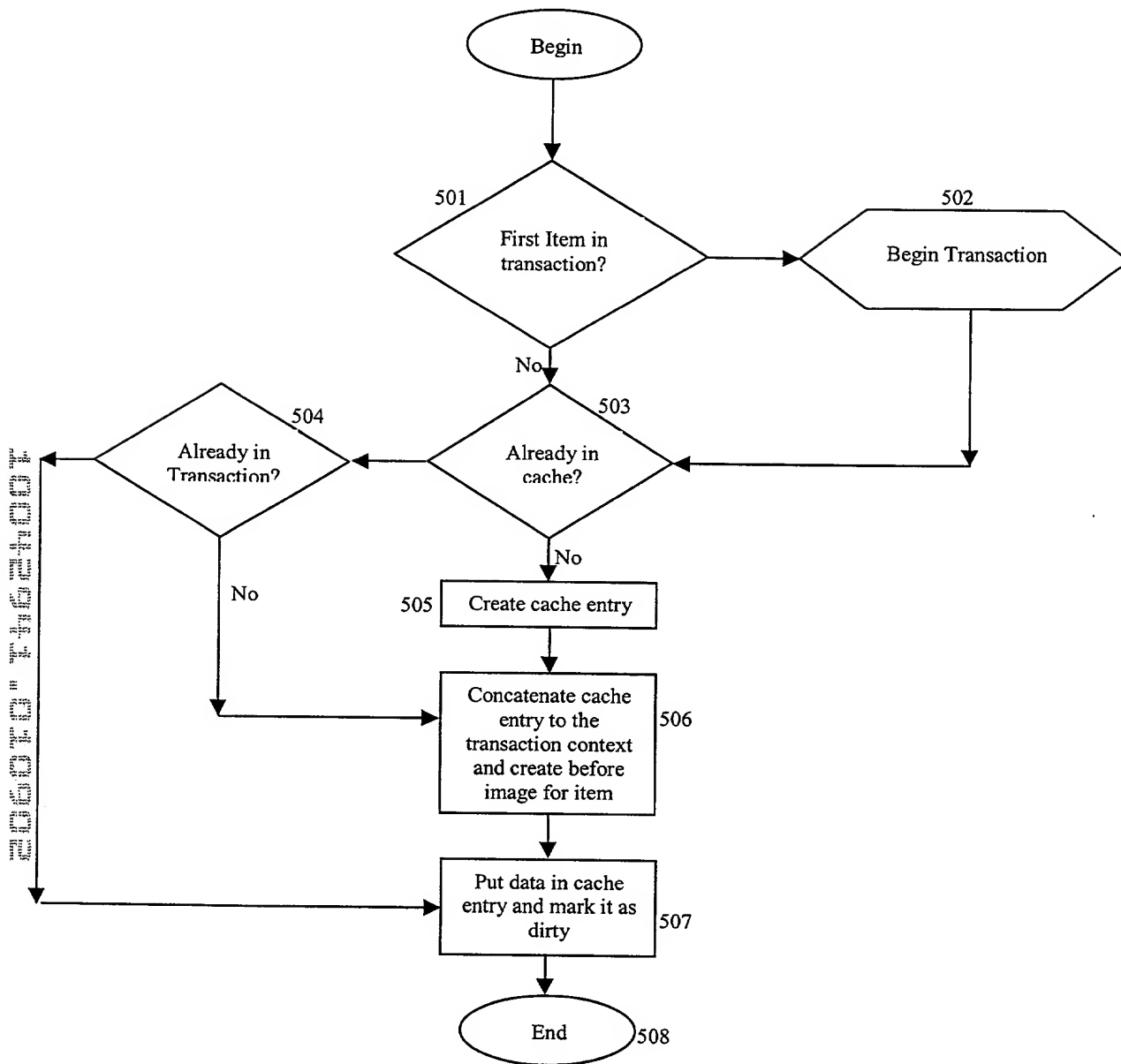
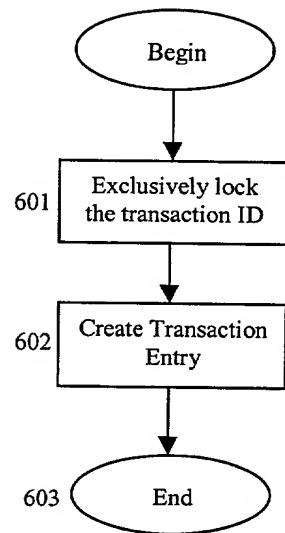
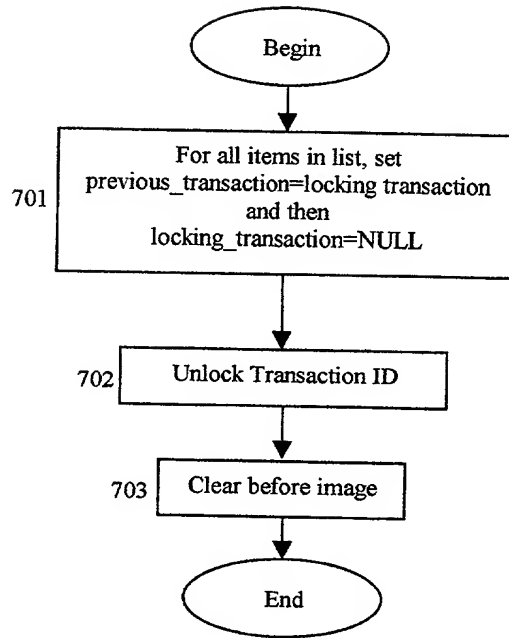


Fig 6 –Begin Transaction



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Fig 7 –End Transaction



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Fig 8 –Physical block written to the database

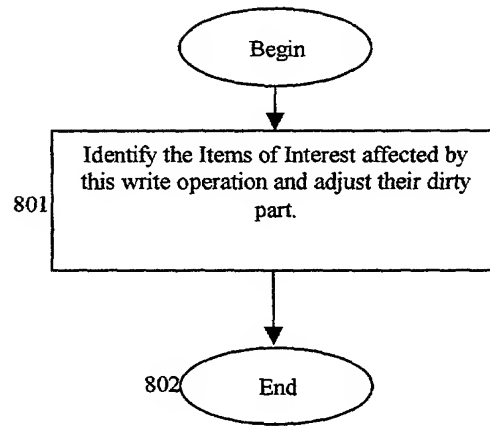


Fig 9 –Unprotected read

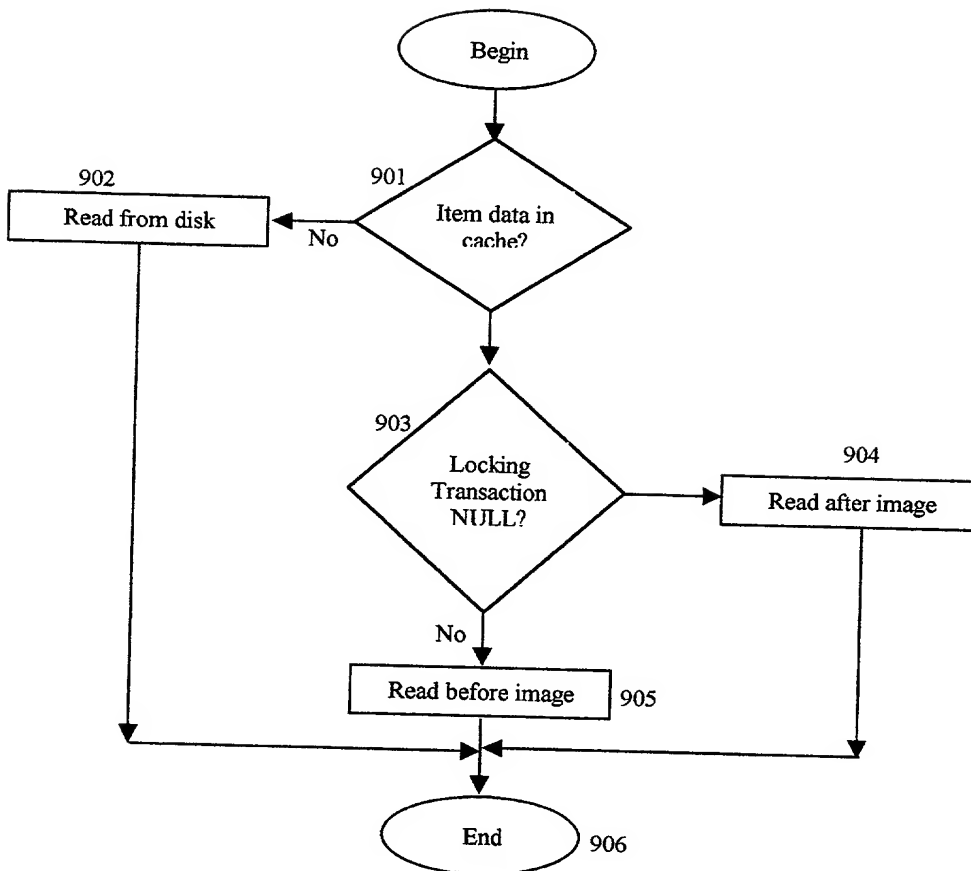
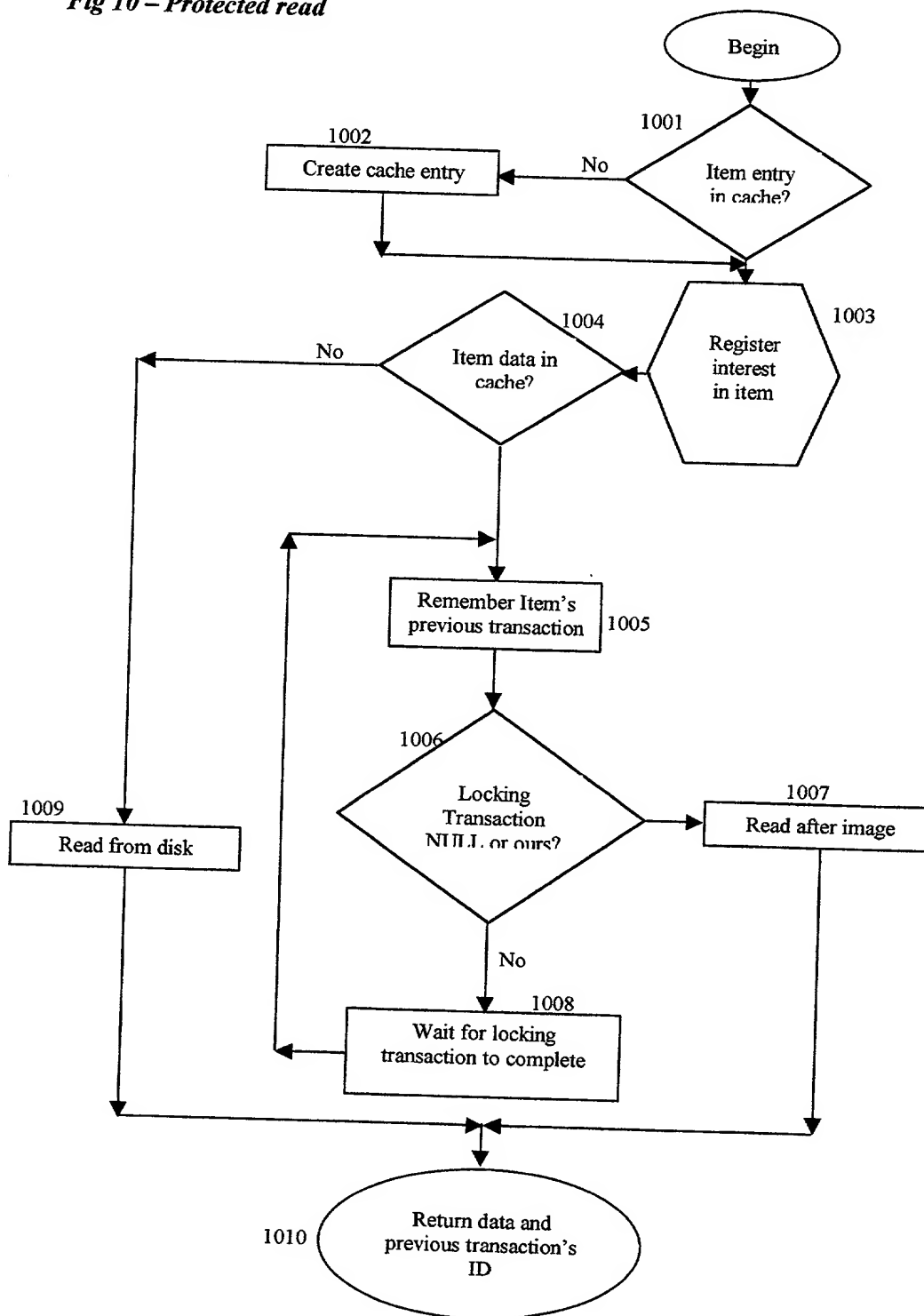
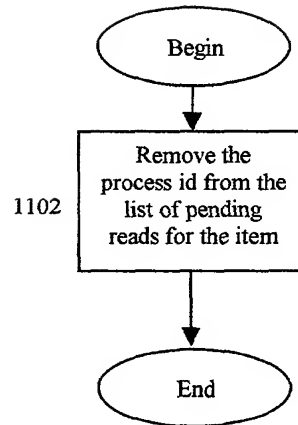
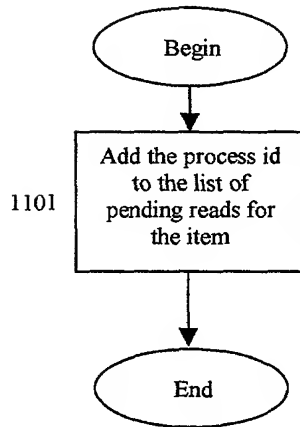


Fig 10 – Protected read



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Fig 11 – Register and unregister interest in item



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Fig 12 – Check Item validity

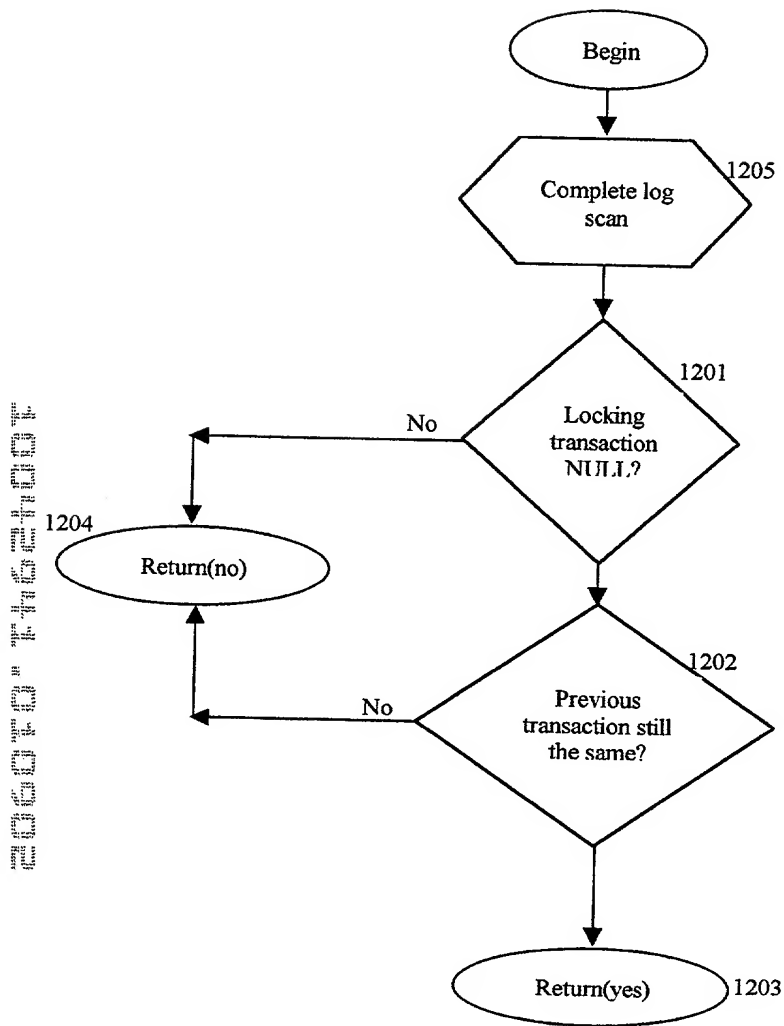


Fig 13 – Post listener

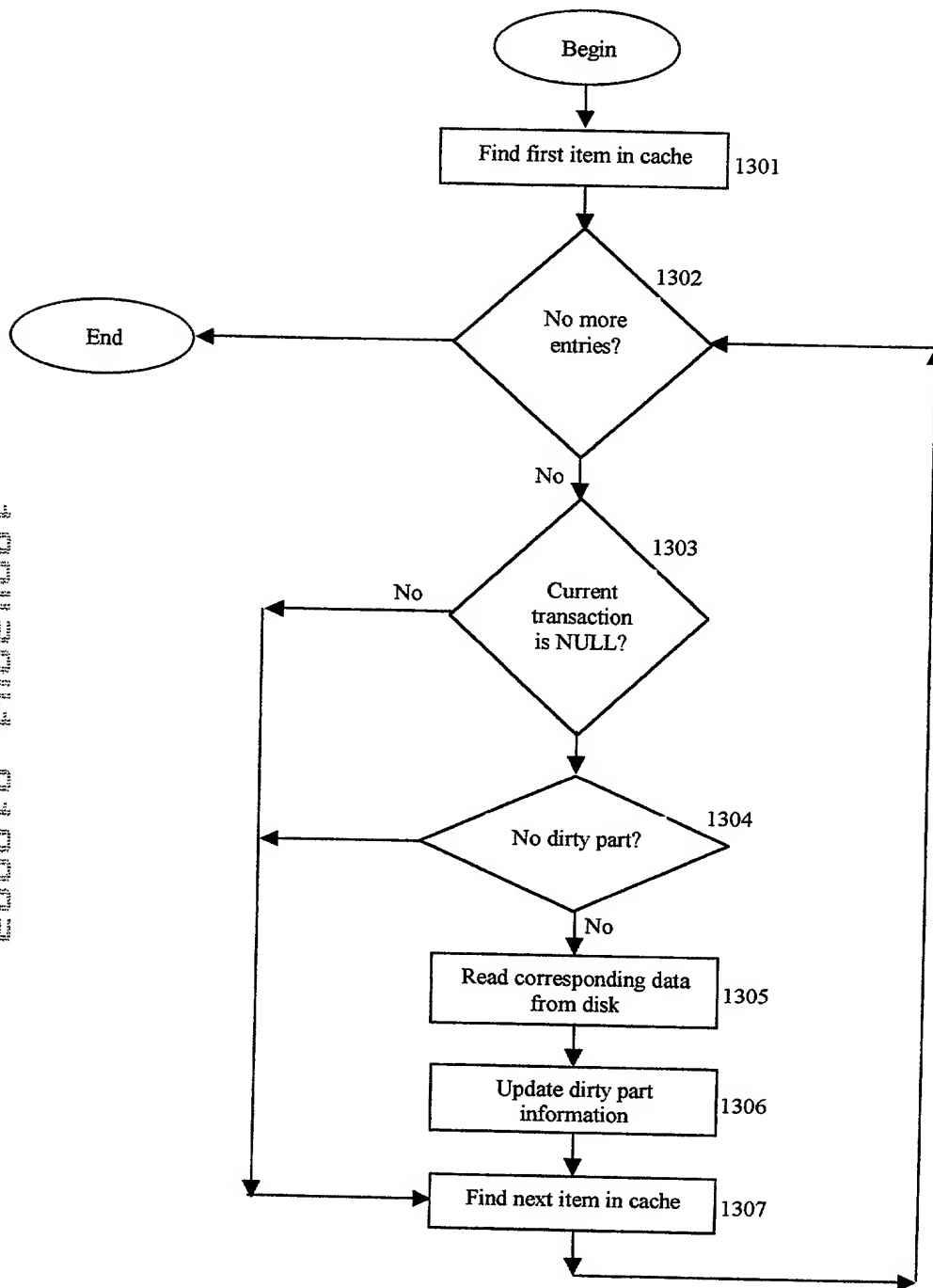


Fig 14 – Recovering the system

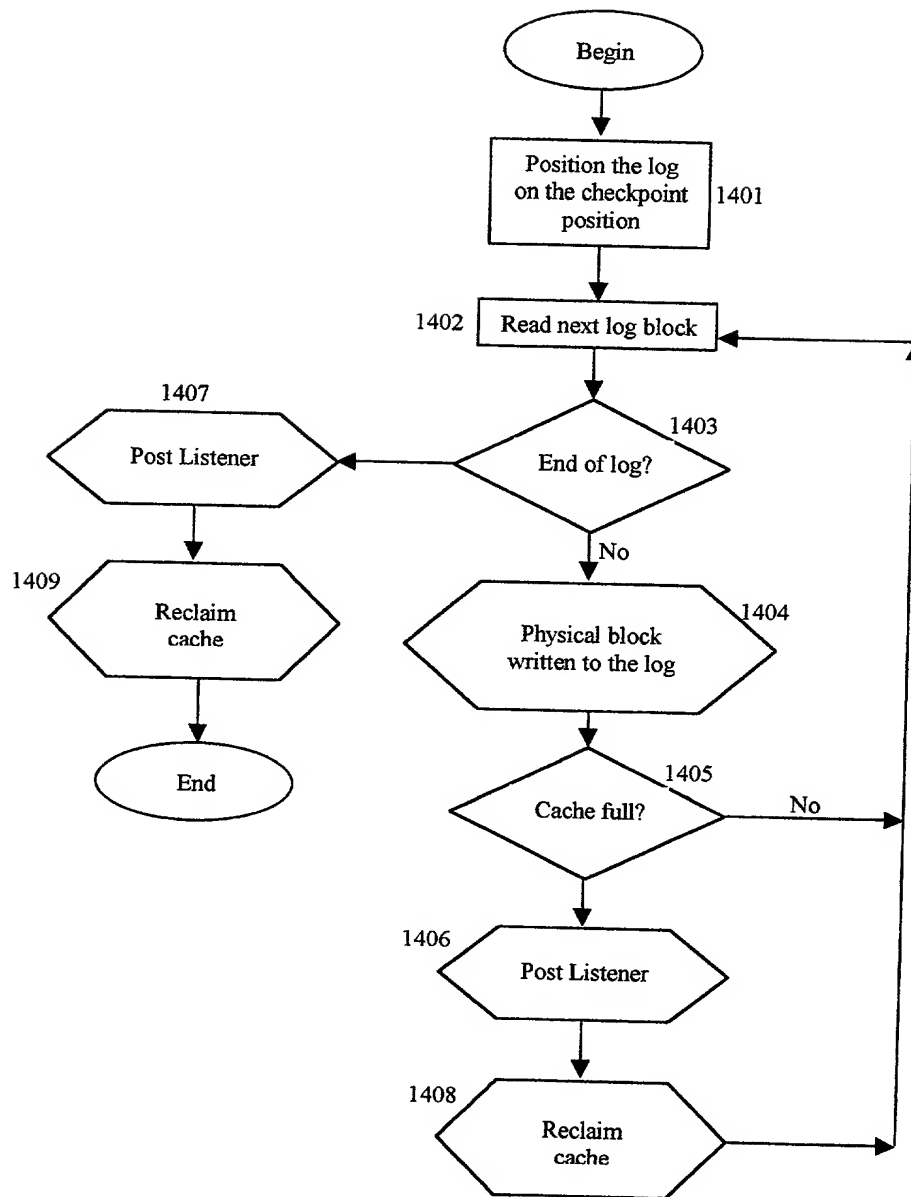
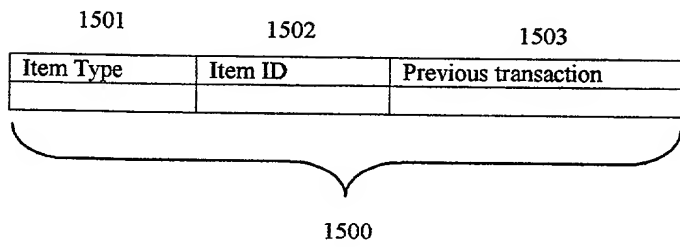


Fig 15 – Entries in the Process items list



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Fig 16 – Initiating update

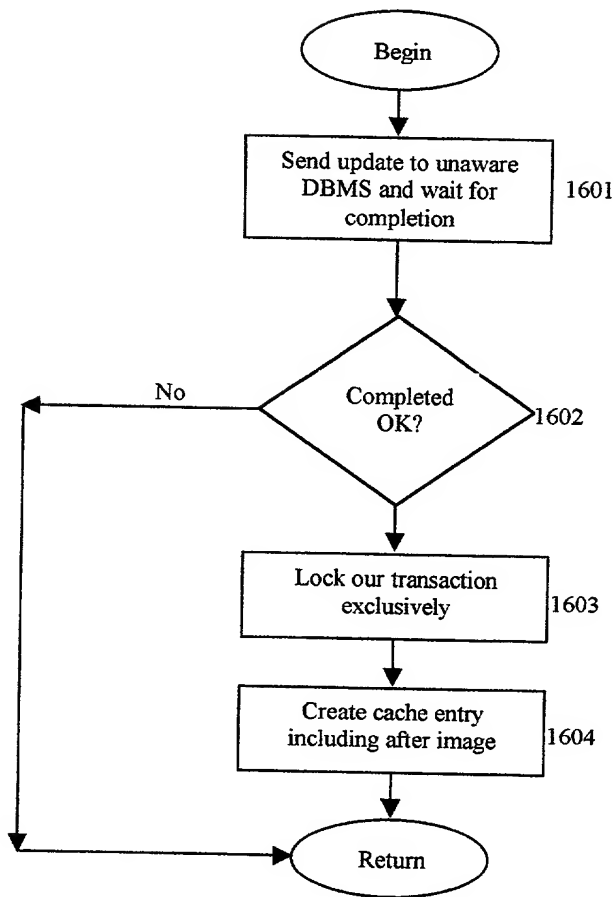


Fig 17 – Supporting snapshots

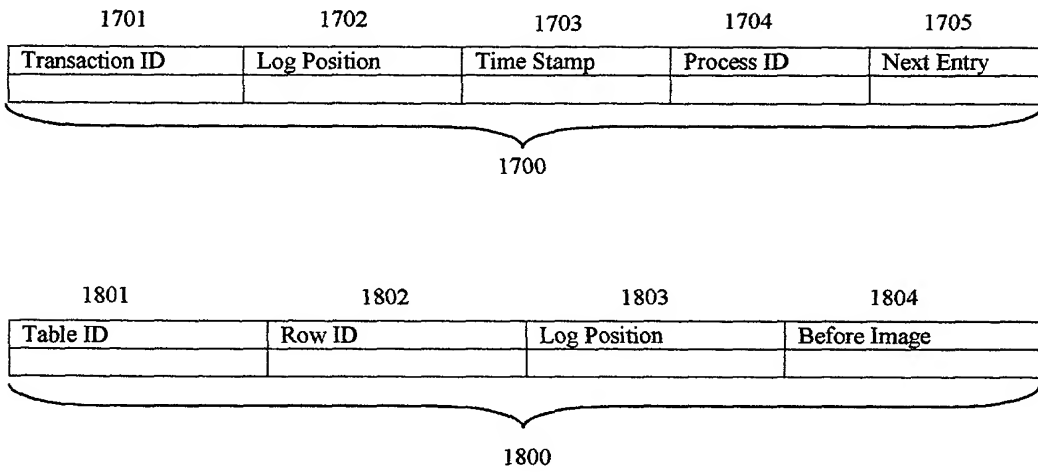


Fig 18 – is_needed

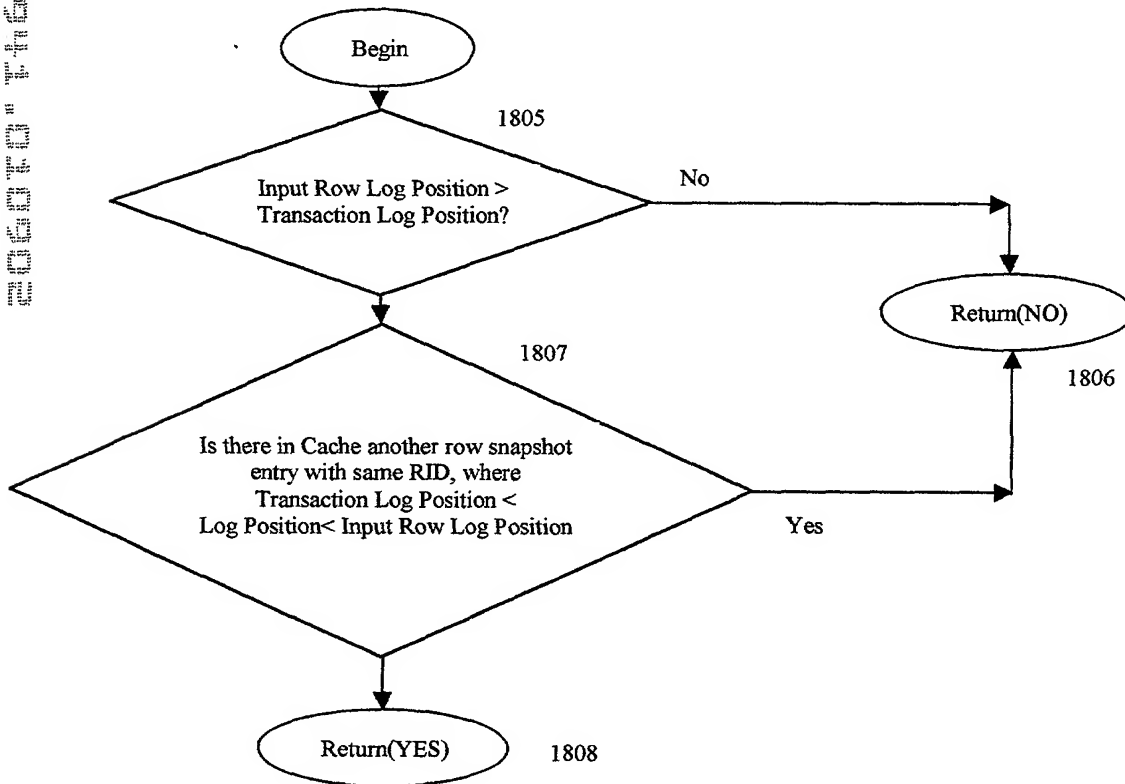
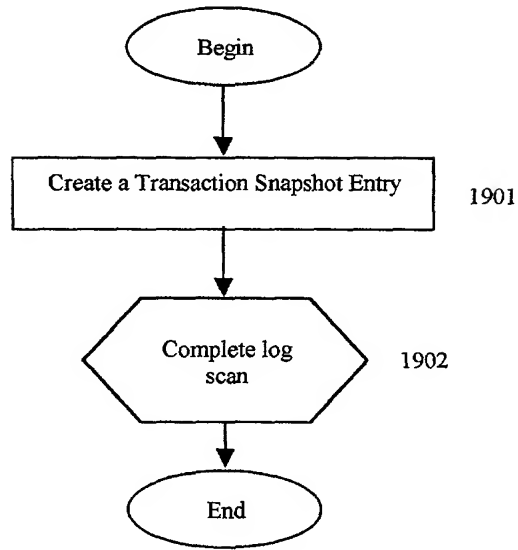


Fig 19 – Start a serializable transaction



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Fig 20 – Snapshot Read

